

## **EXHIBIT 16**

1 IN THE UNITED STATES DISTRICT COURT

2 FOR THE DISTRICT OF DELAWARE

3  
4 TQ DELTA LLC, )  
 )  
5 Plaintiff, )  
 ) C.A. No. 13-1835-RGA  
6 v. )  
 )  
7 2WIRE, INC., )  
 )  
8 Defendant. )

9  
10 J. Caleb Boggs Courthouse  
844 North King Street  
Wilmington, Delaware

11  
12 Wednesday, May 22, 2019  
8:30 a.m.  
Trial Volume III

13  
14 BEFORE: THE HONORABLE RICHARD G. ANDREWS, U.S.D.C.J.

15 APPEARANCES:

16 FARNAN LLP  
17 BY: MICHAEL J. FARNAN, ESQUIRE

18 -and-

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BY: JAMES MURPHY, ESQUIRE  
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25 For the Plaintiff

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11 For the Defendant

12 \*\*\* PROCEEDINGS \*\*\*

13 DEPUTY CLERK: All rise.

14 THE COURT: All right. Good morning, everyone.  
15 Please be seated.

16 All right. So one administrative matter. I  
17 believe the courtroom deputy has passed out the time that's  
18 been allotted or that each side has used. But if it's the  
19 case that some of the depositions that were played  
20 yesterday, that the time is supposed to be shared, we  
21 haven't been given that information. So if there needs to  
22 be a different allocation of that, you need to get us that  
23 information.

24 So in terms of any issues that I can help you  
25 with or at least resolve this morning?

MR. MCANDREWS: Yes, Your Honor. We have a few  
issues about slides.

THE COURT: Okay.

1 A. It depends on the environment. In some cases the  
2 amount of memory is less important than in other cases. It  
3 depends on the application.

4 Q. But it's important certainly in some circumstances,  
5 can we agree on that?

6 A. It's important in at least some situations.

7 Q. If memory is that important, don't you think somebody  
8 would want to write it down at the ITU if it had been  
9 discussed?

10 A. People probably did write it down. Again, this would  
11 be the kind of thing that would not necessarily be discussed  
12 in the context of drafting the standard. It's something  
13 that folks would discuss at coffee breaks and lunch as  
14 they're talking about problems that need to be solved and  
15 ways to solve them.

16 Q. It sounds like a case that you wish someone had  
17 thought of it first and wrote it down, but they didn't,  
18 because you would have evidence of that if they did; right?

19 A. They did write it down. Mazzoni wrote it down.

20 Q. But not at an ITU meeting. The discussion we're  
21 having here is you said someone discussed at the ITU  
22 meeting; right? You don't have any evidence of that; right?

23 A. I wouldn't have evidence of conversations that took  
24 place during coffee breaks.

25 Q. Now, the claims of TQ Delta patents all require

1 transmitting or receiving a message during initialization;  
2 right?

3 A. They require a particular type of message.

4 Q. And Mazzoni does not describe any messages sent or  
5 received during initialization; right?

6 A. That's correct, it does not address initialization at  
7 all.

8 Q. It doesn't discuss any type of initialization, so it  
9 certainly doesn't discuss exchanging messages for allocating  
10 memory; right?

11 A. That's correct.

12 Q. And as I think you were saying, Mazzoni interleaver  
13 and deinterleaver memory sizes are based on a set of  
14 parameters stored in a table; right?

15 A. That's right. A transceiver has a table in which it  
16 stores for each bit rate combination the parameters that  
17 will be used for that bit rate combination.

18 Q. Okay. And so one set of those parameters are  
19 retrieved from a table when size of the memory is set; is  
20 that right?

21 A. I'm not sure I understand your question. When you  
22 say the size of the memory is set, what do you mean?

23 Q. So when the size of the memory is going to be set by  
24 Mazzoni's device, it will pull a set -- it will pull a  
25 grouping of parameters, one from the interleaver, one from

1 the deinterleaver from its memory; right?

2 A. Right. So it has a certain size memory already in  
3 it, that's shared memory, and then when it is -- when it  
4 knows the bit rate combination that it will be using, it  
5 goes into its table and it looks up the parameters that it  
6 needs for that particular bit rate combination.

7 Q. And those parameters come from this table, so the  
8 table stored the memory; right?

9 A. That's correct.

10 Q. And those parameters, those aren't Reed Solomon coded  
11 data bytes?

12 A. Those parameters are interleaver parameters.

13 Q. So they are not Reed Solomon message data bytes?

14 A. That's correct.

15 Q. When they're pulled out of that table from that  
16 memory, that's at the time of installation; right?

17 A. That's what Mazzoni says.

18 Q. Mazzoni has probably a technician out there is what  
19 you envision, technician out there installing your modem and  
20 signed up for service A6, so he's going to set you for A6;  
21 right?

22 A. That I believe is what we concluded when we discussed  
23 Mazzoni, yes.

24 Q. And then the parameters are then frozen at that point  
25 in time and those are the only parameters that are then

1 going to be used by that Mazzoni device; correct?

2 A. Unless and until a different -- it's installed with a  
3 different service, yes.

4 Q. And installed, so in other words, the technician  
5 would have to come out there potentially and change that?

6 A. Correct.

7 Q. But that part is not even discussed in Mazzoni;  
8 right? There is no discussion of changing after it's first  
9 set; right?

10 A. I recall there is a discussion in Mazzoni about the  
11 process that is undertaken when the memory is being split  
12 between the interleaver and deinterleaver. I don't recall  
13 any explicit discussion. Basically I think what you're  
14 saying is hard reset and starting over with a different  
15 service.

16 Q. Right. There is no changing then that's described in  
17 Mazzoni's patent; right?

18 A. That's correct.

19 Q. No resetting them, no changing them to a different  
20 value rate?

21 A. Correct.

22 Q. It doesn't even describe the process of sending a  
23 technician out there; right?

24 A. No, it just says installation generally, and that's  
25 one of the reasons that it's my opinion that someone would

1 find Mazzoni in that sense very limiting.

2 Q. Right. It's very limiting if its memory is froze?

3 A. Right.

4 Q. And certainly at that time, I think devices now you  
5 can -- they ship it to you in a box, you can set it up  
6 yourself, but certainly back at Mazzoni's time, it involved  
7 a technician going out and setting it up; right?

8 A. I don't think that's true. Because I got DSL at my  
9 house right around maybe like 2002, I want to say.

10 Q. But you didn't have any ability to change your  
11 interleaver or deinterleaver size?

12 A. No, of course not. The transceiver figures that out.

13 Q. But again, just back to, there is no initialization  
14 messages of any kind described in Mazzoni?

15 A. That is correct.

16 Q. So certainly no memory sharing message?

17 A. That's correct.

18 Q. Now, do you understand that Dr. Cooklev's opinion is  
19 that adding LB-031 messages to Mazzoni makes Mazzoni  
20 inoperable?

21 A. I understand that to be his position, yes.

22 Q. His position is that it would break Mazzoni, right?

23 A. That is his position as I understand it.

24 Q. During the deposition we agreed that we call that the  
25 Mazzoni problem; right?



1 A. You called it the Mazzoni problem. You can call it  
2 whatever you like. I don't think there is a problem, but...

3 Q. And so on the issue of whether there is a problem --  
4 so he said that it was broken essentially because LB-031  
5 would require Mazzoni to try to use more memory than it  
6 actually has; right?

7 A. That is my understanding of what his opinion was,  
8 yes.

9 Q. And roughly the numbers are if Mazzoni has  
10 approximately 26,000 bytes of total memory, remember that's  
11 about what Mazzoni has?

12 A. I think that's right.

13 Q. And that's based on the highest asymmetrical service;  
14 right?

15 A. It's based on the maximum total, so some of upstream  
16 and downstream the maximum total bits, right.

17 Q. It was about 26,000 total bytes that Mazzoni had  
18 available; right?

19 A. I don't remember if it was 26,000 or 28,000, but  
20 something around there.

21 Q. Let's go with 28,000. Let's go with 28,000 total  
22 bytes that Mazzoni has available, and the messaging, if you  
23 do what LB-031 tells you to do, you wind up needing 36,000  
24 bytes; right?

25 A. I don't agree.